National Aeronautics and Space Administration
NASA Marshall Star: Nov. 10, 2005 : Vol. 46/No. 9

MARSHALL STAR

Serving the Marshall Space Flight Center Community

Nov. 10, 2005

Space station Oxygen Generation System successfully tested at Marshall

By Sherrie Super

The Oxygen Generation System — part of the International Space Station's Environmental Control and Life Support System — has been successfully tested at the Marshall Center.

The tests simulated several production schedules for generating oxygen from clean water. "We're very pleased with the test results," said Cindy Upton, project manager for the Oxygen Generation Assembly. "The power module worked great, and the system produced oxygen exactly like it was supposed to. It successfully passed every stage of the simulations."

The Oxygen Generation System was designed and tested jointly by the Marshall Center and Hamilton Sundstrand Space Systems International in Windsor Locks, Conn. These were the first tests to integrate the Marshall and Hamilton hardware.

Emmett Given/MSFC

An overview of activities during the Oxygen Generation System functional checkout and test.

See Oxygen on page 3

Chance to donate to Combined Federal Campaign is winding down

By Jessica Wallace

And you thought "C.S.I." ended its season with a cliffhanger.

The Marshall Center will host its Combined Federal Campaign "Season Finale" on Thursday, Nov. 17. The celebration, scheduled to begin at 11 a.m. in Morris Auditorium, will reveal the grand total raised at Marshall during this year's fundraising campaign.

This is the final week for Marshall employees to contribute to the campaign,

NASA/MSFC

NASA/MSFC

As part of the campaign's Community Service Days, Marshall Center employees worked inside and out supporting local charities. At the Huntsville Botanical Garden, Madeline Hereford sharpens a box of pencils, while Carolyn Russell, left, and Luster Ingram tend a garden.

See Donate on page 6

Message from the Center Director

In 2003 when NASA first embarked upon its new Exploration mission, the Marshall Space Flight Center began a comprehensive assessment to determine the competency profile needed to successfully execute assigned and projected programs and projects. The buyouts offered in December 2004 and June 2005 were an integral part of the process to re-vector our workforce from competencies necessary to deliver research and technology performed in low earth orbit, to those necessary to succeed in returning the Agency and the Nation to the Moon. In August 2005, Marshall was assigned management responsibility for the crew and cargo launch vehicles. Additionally, we competitively won management of the second Robotic Lunar Exploration Program mission, and have gained other new work relevant to the Exploration initiative. To meet these new assignments, we must continue to rebalance our workforce. This includes buyout of excess competencies and hiring of competencies necessary to meet our

David King

See King on page 6

NASA shows appreciation to East Texas

Marshall's David King and Michael Rudolphi among keynote speakers

By Rick Smith

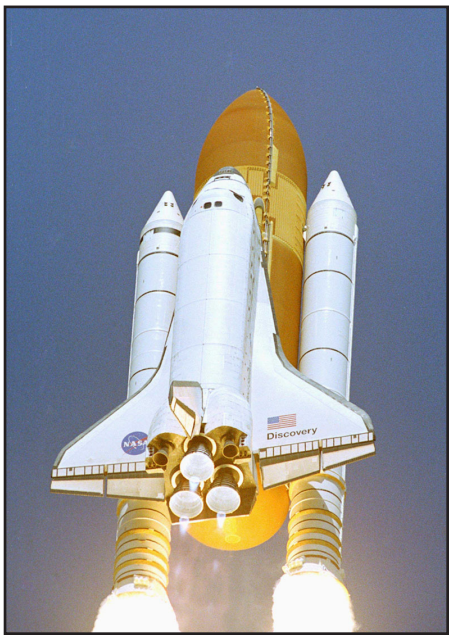
NASA is showing appreciation to the people of East Texas who helped with the space shuttle Columbia recovery effort through a series of events Nov. 6-10 in the communities that hosted recovery teams. The invitations are open to the entire communities.

NASA leaders and astronauts are visiting Hemphill, Nacogdoches, Lufkin, Palestine and Corsicana. Marshall Center Director David King is the keynote speaker at Lufkin, while Michael Rudolphi, director of Marshall's Engineering Directorate, is the keynote speaker at Palestine.

Along with other NASA representatives, King and Rudolphi are working with local community leaders to recognize the efforts that provided the crucial first-response to the Feb. 1, 2003, accident and those who supported the three-month recovery of remains of all Columbia crew members and 80,000 pieces of shuttle debris.

"This is our opportunity to return to these communities and let them know that the work that they did continues to help NASA," said Bill Gerstenmaier, NASA's associate administrator for space operations. "The launch and safe return this summer of the Discovery crew would not have been possible without the incredible dedication of the people of East Texas. The lessons we learned from the debris they collected and the support they provided were instrumental to a safe Return to Flight and a boost to our spirit of exploration."

The writer, an ASRI employee, supports the Public and Employee Communications Office.



NASA/KSC

Space shuttle Discovery moments after launch during the historic Return to Flight mission.

Flight Software Branch of Engineering Directorate achieves improvement rating

Lead appraisers authorized by the Carnegie Mellon Software Engineering Institute in Pittsburgh have recognized the Flight Software Branch as a "Level 2" rated organization in the institute's Capability Maturity Model Integration for Software Engineering. The Flight Software Branch is part of the Engineering Directorate's Data Systems and Software Division. This achievement was accomplished with active participation from the Safety and Mission Assurance Directorate's Software Assurance Team.

The Level 2 assessment supports NASA's Software Engineering Initiative and Software Engineering Requirements. The Office of the Chief Engineer created the initiative in 2001 to advance software practices to meet the scientific and technological objectives and improve how software is developed at NASA. The rating implies the branch has ensured that requirements are managed and that processes are planned, performed, measured and controlled for its projects.

The lead appraisers visited the Flight Software Branch in October to look at software process data and products from two flight software projects developed by branch engineers.

Carnegie Mellon developed the Capability Maturity Model Integration model to help guide process improvement and provide effective planning, engineering and management processes.

Companies and organizations around the world use the model to set improvement goals and priorities and provide guidance to judge process maturity.

For more information about the Carnegie Mellon process improvement approach, visit http://www.sei.cmu.edu .

NASA/MSFC

The Flight Software Branch team receives achievement certificate from the lead appraisers authorized by the Carnegie Mellon Software Engineering Institute in Pittsburgh.

Marshall, university team support disaster relief in Central America

By Rick Smith

The SERVIR environmental monitoring system, developed by NASA and its partners at the National Space Science and Technology Center in Huntsville, played a key role in helping Central American agencies deal with a rash of natural disasters in October.

SERVIR is the Spanish acronym for the Regional Visualization and Monitoring System. Launched in February 2005, it tracks weather, climate and ecological events, from deforestation activities to wildfires, earthquakes and even "red tides" — blooms of toxic algae that threaten local fishing areas.

On Oct. 1, the Santa Ana volcano, dormant more than a century, began hurling hot lava rocks across the El Salvadoran countryside, forcing thousands to flee. Days later, an earthquake measuring 5.5 on the Richter scale struck off the Pacific coast of El Salvador. In the same week, Hurricane Stan lashed the region. The quake, hurricane and gale-force winds triggered severe flooding and deadly mudslides throughout El Salvador, Guatemala and southern Mexico. More than 600 people were killed, and nearly a quarter-million were forced to evacuate their homes, many of which were destroyed.

The SERVIR team at Marshall, the University of Alabama in Huntsville and Science Systems Applications Inc. of Lanham, Md., worked long hours in the SERVIR lab at the NSSTC and satellite locations to help Central American forecasters pinpoint the fallout of the disasters, including additional flooding, mudslides and fires.

Project manager Dan Irwin and the SERVIR team quickly responded to activation of the International Charter for Space and Man-Made Disasters – a worldwide accord initiated in 2000 to provide quick, cost-free space-data acquisition and delivery to those affected by natural or man-made disasters. Recognizing the potential for far-ranging consequences of the triple catastrophe, Irwin played a primary role in expanding activation of the charter from El Salvador to include Guatemala, Honduras and southern Mexico, helping monitor the entire region for after-effects to support and protect relief workers and residents.

SERVIR's real-time imaging and mapping capabilities, extrapolated from remote-sensing data instruments aboard various NASA and commercial satellites and other resources, provided up-to-the-minute imagery of affected areas, digital elevation maps, estimates of changes in floodwater levels and other data.

"The situation in Guatemala and El Salvador was chaotic – entire villages were flooded or buried in mud slides," Irwin said. "Using SERVIR, we were developing satellite-based flood maps and getting them into the hands of disaster managers in the field literally the same day. The disaster managers told us the maps were critical in determining damaged areas and prioritizing their response in the days after the storm."

Irwin also worked with the Institute for the Application of Geospatial Technology, a SERVIR partner in Auburn, N.Y., to adapt static maps of Guatemala to a three-dimensional globe using NASA's World Wind software. Integrating satellite imagery and topography data gathered during shuttle missions, World Wind enables users to "zoom in" from miles above the planet to observe Earth terrain from an altitude of mere hundreds or thousands of feet.

The NSSTC's Short-term Prediction Research and Transition Center also supported SERVIR's efforts. Researchers there contributed the Weather Research and Transition modeling program to the SERVIR package, providing meteorological organizations across Central America with unprecedented real-time regional forecasting capabilities.

For more information about SERVIR, visit its bilingual Web site at http://servir.nsstc.nasa.gov .

The writer, an ASRI employee, supports the Public and Employee Communications Office.

Oxygen

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Emmett Given/MSFC

Rich Mason, standing at left, of Hamilton Sundstrand Space Systems and Pat Fulda of Qualis Corp. in Huntsville discuss final details prior to the tests, while NASA engineer Kevin Takada, right, reviews the test procedure.

The testing took place in a clean-room environment in the high-bay area of Building 4708, where the U.S. Space Station laboratories also were built. The facility was specially designed for testing and evaluating life support technologies. It permits engineers on the ground to troubleshoot problems that may be encountered in space.

With the completion of these tests, the system moves one step closer to its January 2006 shipment to the Kennedy Space Center, its last stop before launch on space shuttle Discovery in 2006.

Developing life-support systems, such as the Oxygen Generation System, is key to supporting long-duration missions to Mars and beyond under NASA's Vision for Space Exploration.

The writer, an ASRI employee, supports the Public and Employee Communications Office.

Federal savings program renewal starts Nov. 14

Participants in the Flexible Spending Account for Federal Employees program, or FSAFEDS, must re-enroll or change their savings allotments between Nov. 14 and Dec. 12 to prevent an interruption in contributions. Enrollments do not carry over from year to year. Spending programs for health and dependent expenses help participants save between 20 percent and 40 percent on eligible out-of-pocket expenses, including aspirin, Band-Aids, contact lens solution and other over-the-counter items. The accounts can also cover doctor co-payments and prescription medicine. For a detailed list of the products covered and more information on the program visit https://www.fsafeds.com .

Nominees sought for Marshall Exchange Council

A Marshall Center Exchange Council committee is accepting nominations through Nov. 15 to fill a seat on the council. Each nomination must be accompanied by a petition signed by 20 or more civil servants and a signed declaration of willingness to serve from the nominee. Petitioners must include their badge numbers. Each candidate must have served as a Marshall civil servant for more than a year. The term of office is two years. Nominees may not serve as a member of the council and an officer of any Exchange-sponsored club at the same time. Petitions should be mailed to Exchange Council Election, HS01X, Building 4315. The Marshall Star will print a complete list of nominees and voting instructions Dec. 1.

Risk Management Workshop set for Nov. 30

A risk management workshop is scheduled for Nov. 30. The class will cover all aspects of the risk management process. Attendees will work on identifying risks and writing risk statements. All Marshall Center civil servants and contractors are invited to the class, scheduled from 8:30 a.m. to 4:30 p.m. in Room G-13E, Building 4200. For more information, contact Keith Layne at 544-4801.

FPMI Solutions to hold seminar Nov. 15

FPMI Solutions, a Huntsville firm providing human capital management services and integrated training systems, will present a seminar on the changing federal workplace Nov. 15, from 7:45 a.m. to 2 p.m., at the Huntsville Marriott. The session, "Meeting Tomorrow's Challenges Today," is presented by Harriette Rinaldi, a former member of the Central Intelligence Agency. The seminar will focus on how to handle changes in the workplace and how to prepare for an agency's future. The FedForum event is open to all federal employees. Registration is required. For more information, visit www.fpmisolutions.com/conferences .

Area business leaders visit Propulsion Research Center

The Marshall Center's Propulsion Research Laboratory recently hosted an Industry Day to familiarize Huntsville-area industry and academia with the unique capabilities offered by researchers and facilities in the Building 4205 complex. Researcher Dr. Tom Markusic, bottom photo, explains development of a high-powered in-space thruster suitable for delivering interplanetary payloads. The laboratory's chief engineer, Harold Gerrish, top photo, demonstrates operation of a solar-powered Stirling generator, a technology that could produce electric power on the lunar surface. More than 70 local business and university leaders heard presentations by Marshall managers, including Craig Seabrook, director of business development, and Dr. George Schmidt, manager of the Propulsion Research Center. Marshall team members also demonstrated work in nuclear power and propulsion system technologies, chemical propulsion, electromagnetic thrusters and solar energy applications. The event will help NASA foster collaborations to successfully meet the propulsion technology needs of the Vision for Space Exploration.

NASA/MSFC

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Classified Ads

To submit a classified ad to the Marshall Star, go to Inside Marshall, to "Employee Resources," and click on "Employee Ads — Submit Ad." Ads are limited to 15 words, including contact numbers. No sales pitches. Deadline for the next issue is 4:30 p.m. Thursday.

Miscellaneous

GE double electric ovens, digital controls, $250; antique Oak dresser, 4-drawers, beveled mirror, $275. 353-0370

Pennsylvania House video cabinet, Cherry, holds up to 30" TV, VCR/DVD, $725. 931-427-2059

Bowling bag w/wheels, holds 4 balls, $50. 837-1774

Emerald and diamond bracelet, $3,500. 961-7889

Jenn Weld 4-door bi-fold set, 60"x80-5/8", $60. 651-5847

Weight bench with set of weights, $60. 881-3527

Cherry 4-drawer chest, $50. 651-7640

Sears Craftsman gas-powered lawn vacuum/chipper, 5HP, $175. 683-9364

Entertainment center w/storage, must move, $45. 890-0799

Pfaff and Viking sewing machines, $100 each. 656-2951

Foosball table, heavy duty, $200. 653-8311

Wedding dress and veil, size 8, $100; computer desk, $100. 776-9165

Stair stepper, $75; Air walker, like the Gazelle, $85. 684-2256

Antique fireplace frame w/coal basket, $100. 694-1217

Mikasa Marquax china set, 55 pieces, plates, cups, saucers, bowls, & more, $400. 534-9838

Tires for sale: three 175/65/R14 radial tires; two Uniroyal; one Yokohama, $25. 256-335-9707

Natural gas vent-free zero clearance cast iron heater, looks like old wood burning stove, $250. 256-656-2965

Early 50s European Telefunken TW501/8TS console stereo, needs tubes, original documentation, $250. 922-1424

Four tickets to Tennessee Titans versus Jacksonville Jaguars, Nashville, Nov. 20, $140. 656-3333

Spanish bedroom suite, king-size headboard, bedside tables, dresser w/double mirror, Amoire, lingerie chest, $2,000. 534-6245

Set of four chrome wheels, 15"x10", 5x2-3/4" BP, $200. 772-5740

Diamond anniversary ring w/seven Marquise cut diamonds, 2-carat total weight, yellow gold, $2,500. 859-4048

Traditional living room sofa & love seat, plaid w/off-white background, $700 both. 256-864-0413

Two Cherry wood swivel bar chairs, $40 each; large white book case, adjustable, $50. 603-3558

BOSS RC-20 Loop Station pedal for guitarists, vocalists, sound-on-sound loops for live/studio performance, $120. 303-3702

George Forman type large portable grill, built-in cooler, thermos Grill2Go/Fire & Ice, zero hours. 233-0705

Mobile and height adjustable basketball goal & mount, $75; trampoline w/safety net, $100. 683-3745

Vehicles

Dodge Dakota truck w/bed cover $16,500. 828-4251

2003 Hyundai Sonata, power moonroof, 4-cyl., automatic, 33K miles, silver, $12,800. 880-9025

1999 Saturn SL2, red, 58K miles, 4-door, power locks/windows, am/fm/cassette, $5,000. 931-427-3591

1999 Lexus ES300, V6, leather, moon roof, 5-disc CD, 72K miles, rebuilt title, $9,900. 895-6640

1991 Ranger 361 XP150, extras, $6,500; 1996 Dodge Ram 1500, Tonneau cover, 13.5K miles, $4,500. 503-0964/John

2005 Nissan Frontier extended cab, low miles, loaded, under warranty, $18,500. 837-1774

2004 Honda Civic Ex, $16,500. 233-6197

Wanted

Old sliding glass doors, will pick up. 874-7874

Found

Bracelet. Call 544-3623 to identify/claim

Free

Composted horse manure for gardens, will load for free. 420-6574

Marshall writer to appear on 'Who Wants to be a Millionaire'

Sherrie Super, a writer in the Public and Employee Communications Office at the Marshall Center, will appear this month on the nationally syndicated game show, "Who Wants to be a Millionaire." Hosted by Meredith Vieira, the episode featuring Super is scheduled to air the week of Nov. 14.

Three other Marshall employees shared the spotlight, serving as Super's "phone-a-friend" lifelines. Phone-a-friend lifelines are pre-selected by contestants to help answer a single question during the quest for a million dollars.

Super's lifelines included Mitzi Adams, a NASA astrophysicist at the National Space Science and Technology Center in Huntsville; Brooke Boen, the designer and editor of numerous Marshall Web sites; and Rick Smith, a writer/editor at the NSSTC.

"Even though I was allowed five phone-a-friend lifelines, I knew I'd be calling one of those three," Super said. "So I had fewer lifelines than most contestants, but mine were by far the best. With a NASA scientist, a NASA Webmaster and a pop-culture expert, I was backed by a lot of brain power."

To become a Millionaire contestant, Super auditioned in August in New York City, where she passed a written test and an interview with a show representative. In September, she returned to New York to sit in the famed Millionaire "hot seat."

"It was an incredible experience," Super said. "Each year, thousands of people audition for a couple hundred slots. Even if you don't win a dime, just making it into the hot seat is a once-in-a-lifetime adventure."

How did Super do? Which lifeline did she call? Viewers will have to tune in to find out, since contestants are sworn to secrecy prior to their air dates. In Huntsville, the game show appears weekdays at 6:30 p.m. on WHNT-TV, Channel 19.

Super, Boen and Smith are employees of AI Signal Research Inc. of Huntsville.

Retiree breakfast meetings moved for the holidays

The monthly breakfast meetings of the Management Operations Office retirees will be moved in November and December to avoid conflicts with the Thanksgiving and Christmas holidays. The group will meet Thursday, Nov. 17 and Thursday, Dec. 15 at the Cracker Barrel in Madison. Both events begin at 10 a.m. All retirees and former employees of the Management Operations Office are invited.

Donate

Continued from page 1

which ends Friday, Nov. 11. The Combined Federal Campaign executive team is encouraging Marshall employees to continue the tradition of giving generously.

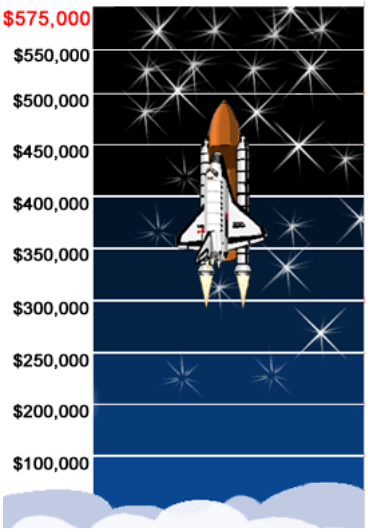
Entitled "Compassion In Action," Marshall's campaign set a goal of $575,000, nearly one-third of the $1.8 million goal for the entire Tennessee Valley campaign.

"Once again, the Marshall team has demonstrated tremendous generosity toward our local and national nonprofit organizations," said campaign chairman Robby Newton, project manager for the Space Environments and Effects Project. "If you have made a donation, I would like to say 'thank you.' If you haven't, please take a minute to consider doing so. With your help, we will meet our goal."

To make contributions, federal employees can login to WebTADS.

The writer, an ASRI employee, supports the Public and Employee Communications Office.

CFC aims for its $575,000 goal



The Marshall Center's 2005 Combined Federal Campaign runs through Nov. 11. So far, 51 percent of Marshall's civil service workforce has contributed $488,288 toward the center's $575,000 goal. That's an average gift of $371 each from the current 1,313 participants out of the 2,581 eligible to donate. The campaign began Oct. 3. To make CFC contributions, employees can log in to WebTADS. Retired employees can call David Percival at 544-0192 for a contribution form.

King

Continued from page 1

current and future mission needs.

As such, I am offering an additional voluntary buyout opportunity to Marshall employees. The buyout application period begins on November 8, 2005 and closes on December 9, 2005. Employees with competencies that are in excess of those needed to perform current or projected assignments will be eligible to receive a separation incentive payment of up to $25,000. In addition, employees in targeted positions may also opt to take early retirement, if eligible. The Office of Human Capital will provide full details of the buyout program, so you can make informed choices for your future. If you have additional questions regarding the buyout opportunity, I encourage you to talk with your supervisor, your administrative officer or your Office of Human Capital representative.

MARSHALL STAR

Vol. 46/No. 9

Marshall Space Flight Center, Alabama 35812
(256) 544–0030
http://www.nasa.gov/centers/marshall

The Marshall Star is published every Thursday by the Public and Employee Communications Office at the George C. Marshall Space Flight Center, National Aeronautics and Space Administration. Classified ads must be submitted by 4:30 p.m. Thursday, and other submissions no later than 5 p.m. Friday to the Marshall Public and Employee Communications Office (CS20), Bldg. 4200, Room 103. Submissions should be written legibly and include the originator's name. Send e-mail submissions to: intercom@msfc.nasa.gov . The Star does not publish commercial advertising of any kind.

Manager of Public and Employee Communications — Dom Amatore
Editor — Jessica Wallace

U.S. Government Printing Office 2006-523-050-20022

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US POSTAGE PAID
HUNTSVILLE, AL
PERMIT NO. 298